

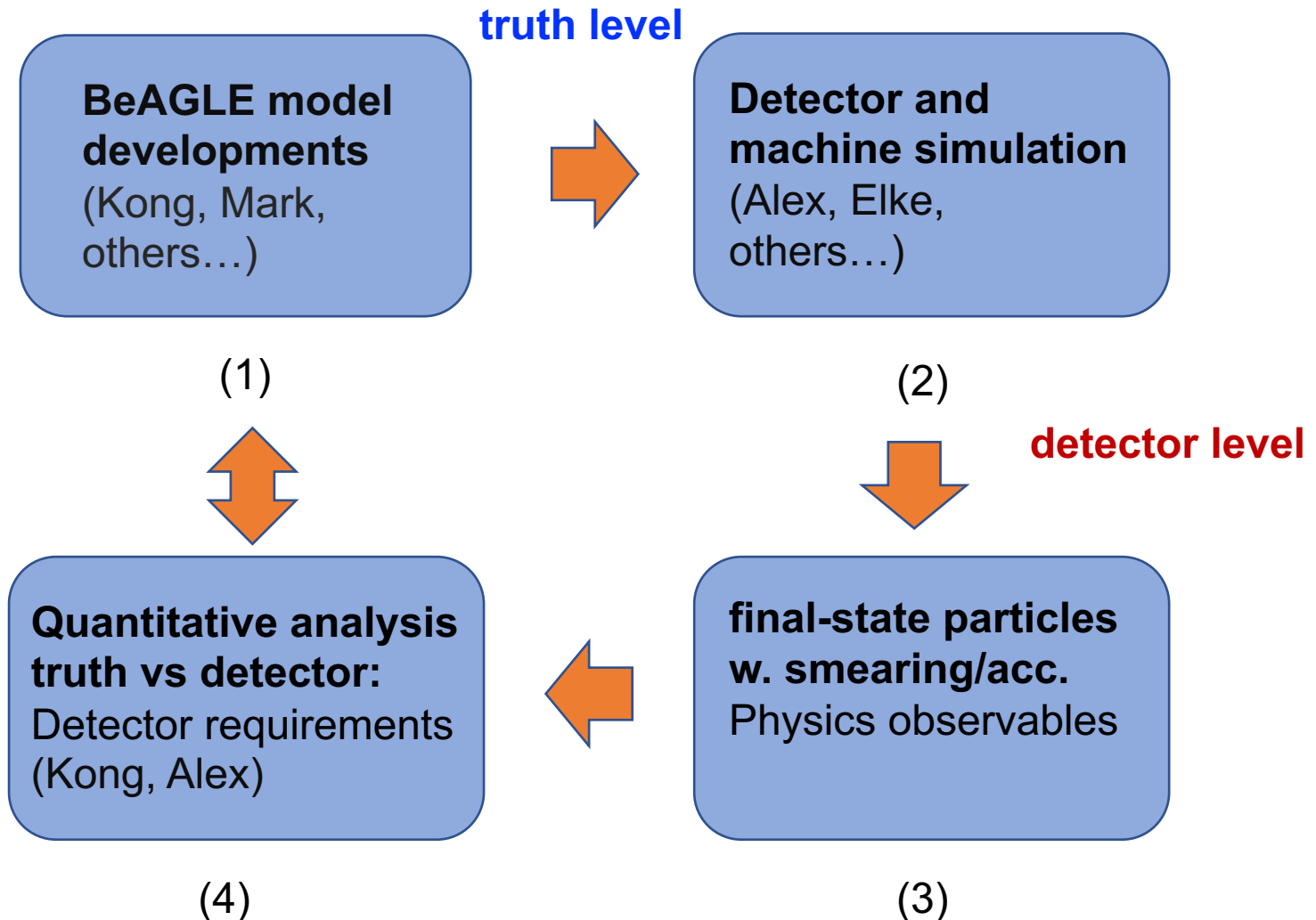
# **BeAGLE + detector simulations workflow**

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# short term workflow



# short term goal - process

(a repeat from last time)

**BeAGLE model  
developments**  
(Kong, Mark,  
others...)

(1)

Deuteron breakups with exclusive J/psi  
(PWIA)

- Spectator  $p_m$  ,  $p_t$  ,  $p_z$  distributions
- alpha (light cone momentum fraction)
- Theta' (gamma-spectator angle)
- $t'$  distributions (  $(p-d)^2 - M^2$  )
- Any other suggestions?

Comparisons:

- Tagging proton and neutrons separately.
- Different energy configurations (5x20, 10x50, 18x137.5 GeV)
- Different input deuteron wavefunctions.

# short term goal - simulation

**Detector and machine simulation**  
(Alex, Elke, others...)

(2)

template table of detector parameters

Detector simulation	ZDC	Roman Pot	Ext. Proton sensor	B0 tracker
Acceptance	Alex will show first look at the acceptance today!			
Energy reso.				
Position reso.				

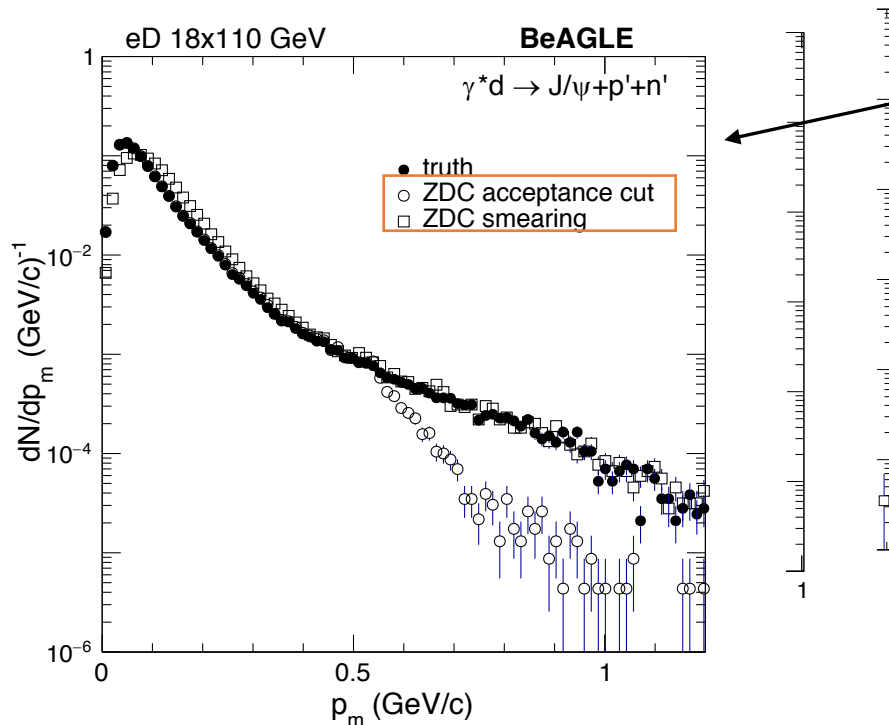
template table of machine/IR parameters

Machine/IR simulation	electron	proton	deuteron
Beam momentum spread			
Crab cavity	well established	well established DVCS proton study	Not well known
Angular divergence			
Others, e.g., beam pipe, ... whatever			

~ 2-3 major scenarios can be assumed. All combinations might be overkilled.

# Temple meeting

example



List of proposed observables in slide 3.  
w. proton and neutron spectator separately.

- Replace with realistic simulations.
- Maybe a separation of “detector driven effect” and “machine/IR driven effect”, and total.
- Caveat will be clearly stated, e.g., parameters that are not clearly understood for deuteron.
- Show only 1 scenario if a 2<sup>nd</sup> one is not available by then.